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RemarksA. Basis for amendments to the claims

Basis for the amendment to claim 1 as to

- without mixing a curing agent or a curing co-agent into the vinylidene fluoride/hexafluoropropylene/ tetrafluoroethylene elastic copolymer

is found in paragraph [0032] of the published application that is reproduced below:

[0032] While curing of the vinylidene fluoride/hexafluoropropylene/tetrafluoroethylene elastic copolymer can also be conducted by methods of curing with the organic peroxide, curing with the polyol and curing with the polyamine, it is especially preferable, in the invention, to conduct curing of the elastic copolymer by irradiation with ionizing radiation. In a case of curing by irradiation with ionizing radiation, since no necessity arises for mixing a curing agent, a curing co-agent, an acid receiving agent and others thereinto, a sealing material less in quantity of a released gas is obtained to thereby make a speed faster at which a system of an semiconductor manufacturing device reaches a target vacuum state, which leads to an advantage that a throughput can be improved. Curing by irradiation with ionizing radiation requires molding prior to the irradiation, wherein though a problem is worried that a molded intermediate is generally deformed with ease and poor in shape retaining property, the molded intermediate of the invention has a fluorine content in a specific range, and therefore, is excellent in shape retaining property and hard to be deformed, thereby enabling a product less in dimensional error to obtained [emphasis added].

Basis for new independent claim 13 is amended independent claim 1.

B. The Office Action

On page 3 of the Office Action, claims 1, 3, 4 and 12 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The subject matter objected to was the recitation of "wherein the sealing material does not include an unsaturated polyfunctional compound." This subject matter

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has been deleted from independent claim 1.

On page 4 of the Office Action, claims 1, 3, 4 and 12 were rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tatemoto et al. (US 4,243,770). This rejection is discussed immediately below.

C. Applicant's discussion

The Tatemoto et al. reference is the sole reference upon which this case is being rejected. This reference is, it is respectfully submitted, no more relevant than JP-A No. 2002-167454, addressed in paragraph [0011] of the published application, which is reproduced below:

[0011] There has been known a method in which a fluororubber is crosslinked by irradiation with ionizing radiation, as a method obtaining a sealing material made from a fluororubber without mixing a crosslinking agent and a filler thereinto (for example, JP-A No. 2002-167454). In such a method in which a fluororubber is crosslinked by irradiation with ionizing radiation, the fluororubber is preformed prior to crosslinking with an extruder or a press, and since thus obtained preform is poor in shape retaining property, dimensional stability and surface smoothness are apt to be insufficient, there has been a case of losing a dimensional precision and smoothness of a surface of a sealing material when the preform is to be matured into the sealing material. In addition, since a preform prior to crosslinking is easy to be subjected to plastic deformation, a molded shape cannot be retained to thereby, alter dimensional precision if the weight thereof or an external force is acted thereon between irradiation with ionizing radiation and preforming, which necessitates carefulness in handling the preform prior to crosslinking, leading to poor workability prior to an irradiation treatment with ionizing radiation with the result of a tendency that a dimensional precision of an obtained sealing material is insufficient.

As further disclosed in paragraph [0032] of the published application, the molded intermediate of the present invention has a fluorine content in a specific range:

[0032] While curing of the vinylidene fluoride/hexafluoropropylene/tetrafluoroethylene elastic copolymer can also be conducted by methods of curing with the organic peroxide, curing with the polyol and curing with

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the polyamine, it is especially preferable, in the invention, to conduct curing of the elastic copolymer by irradiation with ionizing radiation. In a case of curing by irradiation with ionizing radiation, since no necessity arises for mixing a curing agent, a curing co-agent, an acid receiving agent and others thereinto, a sealing material less in quantity of a released gas is obtained to thereby make a speed faster at which a system of an semiconductor manufacturing device reaches a target vacuum state, which leads to an advantage that a throughput can be improved. Curing by irradiation with ionizing radiation requires molding prior to the irradiation, wherein though a problem is worried that a molded intermediate is generally deformed with ease and poor in shape retaining property, the molded intermediate of the invention has a fluorine content in a specific range, and therefore, is excellent in shape retaining property and hard to be deformed, thereby enabling a product less in dimensional error to be obtained [emphasis added].

Like JP-A No. 2002-167454, the Tatemoto et al. reference does not provide the fluorine content in the high range claimed. Each of independent claims 1 and 13 are limited to having a fluorine content in the vinylidene fluoride/ hexafluoropropylene/ tetrafluoroethylene elastic copolymer in the range of from 71.5 to 75 mass %.

D. Advantages of that which is claimed

The sealing material of claim 1 is a product cured (crosslinked) by irradiation with ionizing radiation, with the fluorine content in the claimed high range. Therefore, there are the advantages as described in paragraph [0032] of the published specification, as indicated above. That is to say, when this sealing material is produced, no necessity arises for mixing a curing agent, a curing co-agent (such as an unsaturated polyfunctional compound as disclosed in paragraph [0029] of the published specification), an acid receiving agent and others thereinto. As a result, a sealing material less in quantity of a released gas is obtained to thereby make a speed faster at which a system of an semiconductor manufacturing device reaches a target vacuum state, which leads to an advantage that a throughput

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can be improved.

Moreover, each of independent claims 1 and 13 now specifically and positively recites curing without mixing a curing agent or curing co-agent into the vinylidene fluoride/ hexafluoropropylene/ tetrafluoroethylene elastic copolymer, with the fluorine content in the claimed high range.

E. Housekeeping matters

E.1. Period For Reply

A shortened statutory period for reply was set to expire three months from the mailing date of the Office Action of November 9, 2007. November 9, 2007 plus three months is February 9, 2008. February 9, 2008 falls on a Saturday. This paper is being filed on or before Monday, February 11, 2008.

E.2. Status

The Office Action of November 9, 2007 was made final.

E.3. Disposition Of Claims

Claims 1, 3, 4, 12 and 13 are pending. Claims 5-11 are presently withdrawn.

E.4. Application Papers

This case includes no drawings.

E.5. Priority under 35 U.S.C. §§ 119 and 120

Acknowledgement of the claim for foreign priority was made in the Office Action dated July 25, 2007. This is appreciated.

Receipt of the certified copies of the priority documents was acknowledged in the Office Action dated July

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25, 2007. This is appreciated.

E.6. Attachments

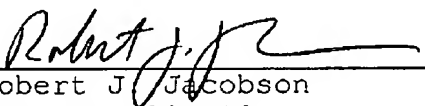
Applicant has filed two PTO-1449 forms in this case (both on March 19, 2005). These two forms have been initialed, signed and returned. This is appreciated.

F. Summary

Applicant respectfully submits that the present application is now in condition for allowance. The Examiner is respectfully invited to make contact with the undersigned by telephone if such would advance prosecution of this case.

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